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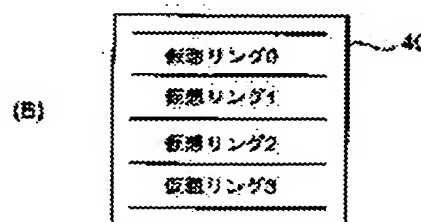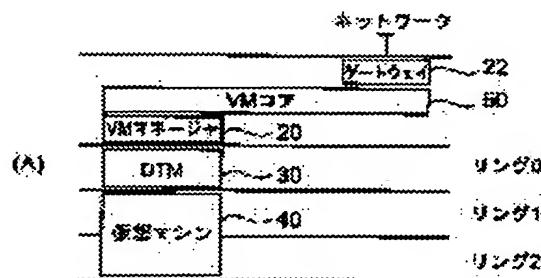
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(54) AUTOMATIC DATA PROCESSOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a virtual environment where a code is directly executed on a processor and to provide a virtual machine architecture in which a security shell is mounted around the respective virtual environments.

SOLUTION: A privilege ring hierarchy inside the virtual environment is provided from the sub set of the privilege ring hierarchy utilized by hardware. From the inside of the virtual environment, access to the hardware requesting the highest privilege is strictly controlled. Communication between a virtual machine and an outer world is performed through a simulated network. The network is protected by the virtual machine acting as a firewall and a data transaction is protected by using ciphering. The hardware holds a ciphering key not utilizable for the virtual environment. The virtual environment receives an intrinsic key acquirable from an external server by a safe transaction utilizing a hardware key.

LEGAL STATUS

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